

## MITIGATION - SCIENCE AND TECHNOLOGY ADVANCES FOR CHEMICAL AND BIOLOGICAL HAZARD MITIGATION

### Protecting Military Working Dogs In A Contaminated Environment

**Brian France** TDA Research, Inc.

Military working dogs (MWDs) have been an integral part of the US military since its inception. Currently, these canines are assigned to every branch of the US Military and are deployed worldwide. They are frequently deployed into environments that can be hazardous. Canines are particularly susceptible to hazardous materials and chemicals. MWDs do not currently have protective equipment or decontamination technologies that can be applied in an austere operational environment. TDA Research has conducted research to develop lightweight protective shelters to protect MWDs from contamination. A military working dog cannot perform its key functions (detect, alert, bite, etc.) in a contaminated environment, thus the MWD must be protected for evacuation. TDA has designed and developed a protective shelter using lightweight commercially available materials to protect these important military assets.

Further, TDA has conducted research to identify materials and methods to decontaminate MWDs that have come in contact with toxins. TDA has conducted studies investigating agent movement in fur and appropriate methods to remove the materials. Canines can spread toxins with their fur, and it is important to remove these materials at the point of exposure before they cause harm to the canine, transfer to the handler or spread to the evacuating vehicle. Testing with live agents demonstrated the ability for the identified materials and decontamination methods to remove lifesaving quantities of toxins. These decontamination materials and methods can be assembled into a small, lightweight kit that is easy to use and can quickly be performed in a military environment.

This material is based upon work supported by the Department of Defense Small Business Innovative Research (SBIR) Program, Office of the Secretary of Defense-Basic Research Office (OSD-BRO) and the Army Research Office under Contract No. W911NF-24-C-0061 and W911NF-21-C-0024. SBIR Topics CBD222-003 and CBD192-001.